CLAIMS

1. A method for processing low voltage threshold transistors on a semiconductor wafer, the method comprising:

forming core transistors with drains on the semiconductor wafer;

forming low voltage threshold transistors with drains on the semiconductor wafer;

forming input/output transistors with drains on the semiconductor wafer;

forming a spacing layer over the core, low voltage and input/output transistors;

forming a first photoresist mask layer over the low voltage transistors;

doping the drains of the core and the input/output transistors, wherein the doping is a medium doping;

forming a second photoresist mask layer over the input/output transistors; and

doping the drains of the core and the low voltage threshold transistors, wherein the doping is a medium doping.

2. The method of claim 1 wherein the doping includes doping Arsenic.

3. The method of claim 2 wherein the doping includes doping at a range from 1 - 40 kev at 2e14 to 3 e15.

4. The method of claim 1 wherein the doping includes doping Phosphorus.

5. The method of claim 4 wherein the doping includes doping at a range from 1 - 30 keV 2 e14 to 3 e15.

6. The method of claim 1 wherein the doping includes doping Boron.

7. The method of claim 6 wherein the doping includes doping at a range from 0.5 ev 2 e14 to 3 e15.

8. The method of claim 1 wherein the doping includes doping Boron di-fluoride.

9. The method of claim 8 wherein the doping includes doping at a range from 2 keV to 20 keV 2 e14 to 3 e15.

10. A method for processing low voltage threshold transistors on a semiconductor wafer, the method comprising:

forming core transistors with drains on the semiconductor wafer;

forming low voltage threshold transistors with drains on the semiconductor wafer;

forming input/output transistors with drains on the semiconductor wafer;

forming a first photoresist mask layer over the low voltage and the input/output transistors;

doping the drains of the core transistors, wherein the doping is a medium doping;

forming a spacing layer over the core, low voltage and input/output transistors;

forming a second photoresist mask layer over the input/output transistors;

doping the drains of the core and the low voltage threshold transistors, wherein the doping is a medium doping;

forming a third photoresist mask layer over the core and the low voltage transistors; and

doping the drains of the input/output transistors, wherein the doping is a medium doping.

11. The method of claim 10 wherein the doping includes doping Arsenic.

12. The method of claim 11 wherein the doping includes doping at a range from 1 - 40 kev at 2e14 to 3 e15.

13. The method of claim 10 wherein the doping includes doping Phosphorus.

14. The method of claim 13 wherein the doping includes doping at a range from 1 - 30 keV 2 e14 to 3 e15.

15. The method of claim 10 wherein the doping includes doping Boron.

16. The method of claim 15 wherein the doping includes doping at a range from 0.5 ev 2 e14 to 3 e15.

17. The method of claim 10 wherein the doping includes doping Boron di-fluoride.

18. The method of claim 17 wherein the doping includes doping at a range from 2 keV to 20 keV 2 e14 to 3 e15.

19. A method for processing low voltage threshold transistors on a semiconductor wafer, the method comprising:

forming core transistors with drains on the semiconductor wafer;

forming low voltage threshold transistors with drains on the semiconductor wafer;

forming input/output transistors with drains on the semiconductor wafer;

forming a spacing layer over the core, low voltage and input/output transistors;

forming a photoresist mask layer over the low voltage transistors and the IO transistors;

doping the drains of the core transistors, wherein the doping is a medium doping;

removing the photoresist mask layer; and

doping the drains of the core, the low voltage threshold, and the IO transistors, wherein the doping is a medium doping.

20. The method of claim 19 wherein the doping includes doping Arsenic.

21. The method of claim 20 wherein the doping includes doping at a range from 1 - 40 kev at 2e14 to 3 e15.

22. The method of claim 19 wherein the doping includes doping Phosphorus.

23. The method of claim 22 wherein the doping includes doping at a range from 1 - 30 keV 2 e14 to 3 e15.

24. The method of claim 19 wherein the doping includes doping Boron.

25. The method of claim 24 wherein the doping includes doping at a range from 0.5 ev 2 e14 to 3 e15.

26. The method of claim 19 wherein the doping includes doping Boron di-fluoride.

27. The method of claim 26 wherein the doping includes doping at a range from 2 keV to 20 keV 2 e14 to 3 e15.